

ABSTRACT OF THE DISCLOSURE

The invention includes dispensing a suspension containing solid particles for use in manufacturing a dosage form or other biomedical article by 3DP. The suspension contains solid particles suspended in a liquid. The solid particles may be one or more Active Pharmaceutical Ingredients. The solid particles may be particles of material that are insoluble in the liquid, or they may be particles of a substance that have already dissolved in the liquid up to the saturation level and are present in a concentration beyond what can be dissolved. In addition to solid particles, the liquid may also contain other substances dissolved in it, either substances containing Active Pharmaceutical Ingredients (API) or substances without API. One aspect of the invention includes prevention of agglomeration by adding one or more of several categories of additives to the suspending liquid. Another aspect of the invention includes manipulating the surface charge of the particles in an API suspension to prevent particles from agglomerating. A further aspect of the invention includes an amorphous API that has a greater bioavailability than the corresponding crystalline material. Yet another aspect of the present invention includes a system for providing continuous circulation of the suspension such that the solid particles remain dispersed in the suspension.